

**Remarks**

Claims 9-21 are currently pending. New claim 21 has been added. Reconsideration of the present application is respectfully requested in view of the following remarks.

**Rejection Under 35 U.S.C. §103**

Claims 9-20 are have been rejected as obvious under 35 U.S.C. §103(a) over U.S. Patent No. 7,134,265 to Shigemura ("Shigemura") in view of U.S. Patent No. 4,405,686 to Kuraoda et al. ("Kuroda") in view of U.S. Patent No. 5,896,634 to Brodowski et al. ("Brodowski"). These rejections are respectfully traversed on the grounds that the combination of references fails to provide a *prima facie* case of obviousness for failing to disclose every element of the present claims.

The present invention is directed to yarns and fabric that include a composite yarn. The composite yarn includes an elastomeric yarn and a hard yarn where the elastomeric yarn has a draft from 1.2X to 6.2X and is positioned adjacent, substantially parallel and external to the hard yarn and adhered with a size material.

In order to provide a *prima facie* case of obviousness, a reference or combination of references must disclose every element of the claims, *In re Glatt Air*, 630 F.3d 1026 (Fed. Cir. 2011), along with some rationale for combining references or modifying a reference in addition to predictable results or an expectation of success.

Shigemura is directed to a composite yarn that includes an elastic core and a hard yarn sheath. Shigemura fails to disclose that the elastic core is aligned adjacent to and substantially parallel to the hard yarn as well as failing to disclose the elastic yarn is external to the hard yarn (as a "core," the elastic yarn is necessarily internal.) While Shigemura discloses that a variety of methods are useful for preparing the core/sheath composite yarn, only methods that would result in a composite yarn where the elastic and hard yarns are NOT aligned and substantially parallel are disclosed. Specifically, at column 5 lines 10 to 26, the methods include spiral winding of the hard yarn, interlacing of the hard yarn and false-twisting.

Kuroda provides no disclosure that overcomes the deficiencies of Shigemura. Unlike Shigemura, Kuroda provides a conjugate yarn, also known as bicomponent or biconstituent yarn. Such yarns do not include separate components, but instead combine the components through co-extrusion into the same fiber. Moreover, the yarn in Kuroda is crimpable, where even in a side-by-side configuration, the elastic constituent would not remain aligned substantially parallel to the non-elastic component, as in FIGs. 6, 7, 9, and 10.

The teachings of Shigemura, a composite yarn, Kuroda, a conjugate yarn are not properly combinable. The only method through which Kuroda teaches the preparation of a side-by-side yarn, where the elastic component may arguably be external to the non-elastic component is through co-extrusion. In this case, no size material is necessary to adhere the components of the conjugate yarn. By contrast, there is no teaching in Shigemura that the elastic yarn could be external to the hard yarn, each of which are separate components. Co-extrusion is not a possibility for the composite yarns of the present invention as the elastomeric yarn must be prepared and drafted prior to combination with the hard yarn. Shigemura fails to teach how a composite yarn may be prepared where the elastic yarn is external to the hard yarn as the only methods of preparing such a yarn result in a twisted or interlaced yarn.

Brodowski is cited only for teaching a size material wherein the Examiner takes official notice that sizing agents are conventionally applied as coatings. Applicant respectfully submits that Brodowski fails to overcome the deficiencies of Kuroda and Shigemura as failing to teach the aligned yarn of the present invention. Furthermore, Applicant respectfully requests that Examiner provide a reference showing that sizing agents are used as coatings. Accordingly, the combination of Shigemura and Kuroda with Brodowski fail to establish a *prima facie* case of obviousness with respect to claims 9-20. Reconsideration and withdrawal of these rejections are, therefore, respectfully requested.

Claims 9-10 and 12-20 have been rejected under 35 U.S.C. §103(a) as unpatentable over Shigemura in view of Kuroda in view of Japanese Patent no. 4 7333 754 to Nakatomi ("Nakatomi"). This rejection is respectfully traversed.

Nakatomi is cited only for teaching a size material wherein the Examiner takes official notice that sizing agents are conventionally applied as coatings. Applicant respectfully submits that

Nakatomi fails to overcome the deficiencies of Kuroda and Shigemura as failing to teach the aligned yarn of the present invention. Furthermore, Applicant respectfully requests that Examiner provide a reference showing that sizing agents are used as coatings. Accordingly, the combination of Shigemura and Kuroda with Nakatomi fail to establish a *prima facie* case of obviousness with respect to claims 9-10 and 12-20. Reconsideration and withdrawal of these rejections are, therefore, respectfully requested.

Claims 9-20 are rejected under 35 U.S.C. §103(a) as unpatentable over Shigemura in view of Kuroda in view of U.S. Patent No. 3,719,664 to Hayes et al. ("Hayes"). This rejection is respectfully traversed.

Hayes fails to overcome the deficiencies of Kuroda and Shigemura as failing to teach the aligned yarn of the present invention. Accordingly, the combination of Shigemura and Kuroda with Hayes fail to establish a *prima facie* case of obviousness with respect to claims 9-20. Reconsideration and withdrawal of these rejections are, therefore, respectfully requested.

Claims 13-20 are rejected under 35 U.S.C. §103(a) as unpatentable over Shigemura in view of Kuroda in view of Brodowski and further in view of U.S. Patent No. 3,867,242 to Miller ("Miller"). This rejection is respectfully traversed.

Miller provides no disclosure that overcomes the deficiencies of Kuroda, Shigemura, and Brodowski as failing to teach the aligned yarn of the present invention. Accordingly, the combination of Shigemura, Kuroda and Brodowski with Hayes fails to establish a *prima facie* case of obviousness with respect to claims 13-20. Reconsideration and withdrawal of these rejections are, therefore, respectfully requested.

Claims 9-10 and 12-20 have been rejected under 35 U.S.C. §103(a) as unpatentable over Shigemura in view of Kuroda in view of Nakatomi and further in view of Miller. This rejection is respectfully traversed.

Miller provides no disclosure that overcomes the deficiencies of Kuroda, Shigemura, and Nakatomi as failing to teach the aligned yarn of the present invention. Accordingly, the combination of Shigemura, Kuroda and Nakatomi with Miller fails to establish a *prima facie* case

of obviousness with respect to claims 13-20. Reconsideration and withdrawal of these rejections are, therefore, respectfully requested.

Claims 13-20 are rejected under 35 U.S.C. §103(a) as unpatentable over Shigemura in view of Kuroda in view of Hayes and further in view of Miller. This rejection is respectfully traversed.

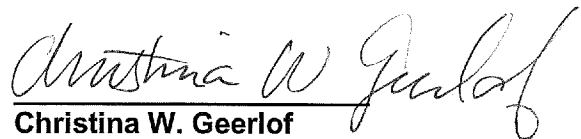
Miller provides no disclosure that overcomes the deficiencies of Kuroda, Shigemura, and Hayes as failing to teach the aligned yarn of the present invention. Accordingly, the combination of Shigemura, Kuroda and Hayes with Miller fails to establish a *prima facie* case of obviousness with respect to claims 13-20. Reconsideration and withdrawal of these rejections are, therefore, respectfully requested.

#### **CONCLUSION**

For the reasons stated above, claims 9-21 are believed to be in condition for allowance. Accordingly, Applicant respectfully requests that the Application be allowed. If prosecution may be further advanced, the Examiner is invited to telephone the undersigned to discuss this application.

Date: April 1, 2011

Respectfully submitted,



**Christina W. Geerlof**  
ATTORNEY FOR APPLICANT  
Registration No.: 45,690  
Telephone: 302 683-3314  
Facsimile: 302 683-3474